

IN THE CLAIMS

The following is a complete listing of the claims:

1. (Currently Amended) An output adapter frame for a die sorter, comprising:

at least one channel along the upper surface of the output adapter frame,
wherein the channel holds a plurality of die carriers and has an open end and a closed end;

a barrier located at the closed end of each channel; and

a retention mechanism for each of the plurality of die carriers, wherein the retention mechanism is along a side of the channel and actively biases the die carrier against the opposing side of the channel.

2. (Currently Amended) The output adapter frame of Claim 1, wherein the output adapter frame is handled in the same manner during the die sorting process as a<n> standard output wafer frame.

3. (Currently Amended) The output adapter frame of Claim 1, wherein the output frame has the same physical exterior dimensions as a SEMI standard film frame design for an 8-inch or 12-inch wafer.

4. (Currently Amended) The output adapter frame of Claim 1, wherein the die carriers are waffle packs or GEL-PAK die carriers.

5. (Currently Amended) The output adapter frame of Claim 1, wherein the die carriers are approximately 2" by 2".

6. (Currently Amended) The output adapter frame of Claim 5, further comprising four channels in parallel with each other.

7. (Currently Amended) The output adapter frame of Claim 6, wherein the four channels comprise two outer channels capable of holding two 2" by 2" die carriers each and two inner channels capable of holding four 2" by 2" die carriers each.

8. (Currently Amended) The output adapter frame of Claim 1, wherein the die carriers are approximately 4" by 4".

9. (Currently Amended) The output adapter frame of Claim 8, wherein the at least one channel is a single channel.

10. (Currently Amended) The output adapter frame of Claim 9, wherein the single channel is capable of holding two 4" by 4" die carriers.

11. (Currently Amended) The output adapter frame of Claim 1, wherein the output frame and the at least one channel are a unitary structure.

12. (Currently Amended) The output adapter frame of Claim 1, wherein the retention mechanism is a spring clip.

13. (Currently Amended) An output adapter frame for use with a die sorter, comprising:

a plurality of approximately square recesses, each square recess capable of holding one square die carrier ~~or die~~, wherein the output adapter frame is handled in the same manner during the die sorting process as a $\langle n \rangle$ standard output wafer frame.

14. (Currently Amended) The output adapter frame of Claim 13, wherein the output frame has the same physical exterior dimensions as a SEMI standard film frame design for an 8-inch or 12-inch wafer.

15. (Currently Amended) The output adapter frame of Claim 13, wherein the die carriers ~~or die~~ are approximately 2" by 2" or 4" by 4".

16. (Currently Amended) The output adapter frame of Claim 13, wherein the adapter frame is a unitary structure.

17. (Currently amended) A die sorter for sorting die contained in square die carriers, comprising:

an input wafer cassette;

a plurality of wafer frames containing the die, wherein the wafer frames are capable of being loaded and unloaded from the input wafer cassette;

a first wafer frame handler for loading and unloading the wafer frames;

an output wafer cassette;

a plurality of adapter frames, wherein the adapter frames are capable of being loaded and unloaded from the output wafer cassette, and wherein the adapter frames comprise at least one recess capable of holding a plurality of die carriers having an

open end and a closed end and at least one retention mechanism that actively biases the die carriers against an opposing side of the recess;

a second wafer frame handler for loading and unloading the adapter frames;
and

a die sorting mechanism to sort the die onto the die carriers on the adapter frames.

18. (Currently Amended) The die sorter of Claim 17, wherein the adapter frames are handled in a similar way as a<n> standard wafer frame.

19. (Original) The die sorter of Claim 17, wherein the die carriers are waffle packs or GEL-PAK die carriers.

20. (Original) The die sorter of Claim 17, wherein the adapter frames each comprise a plurality of parallel recesses, each recess capable of holding a plurality of the die carriers.

21. (Original) The die sorter of Claim 20, wherein the adapter frames each further comprise a retention mechanism along one side of the recesses.

22. (Original) The die sorter of Claim 17, wherein the adapter frames have the same physical exterior dimensions as a SEMI standard film frame design for 8-inch or 12-inch wafers.

23. (Withdrawn) A method of die sorting, comprising:

unloading an adapter frame from an output wafer cassette;

sliding a plurality of die carriers into at least one slot on the adapter frame;
securing each of the die carriers within the slot; and
loading the adapter frame back into the output wafer cassette.

24. (Withdrawn) The method of Claim 23, wherein the unloading and the loading are by the same process as unloading and loading a wafer frame.

25. (Withdrawn) The method of Claim 23, wherein the die carriers are square die carriers.

26. (Withdrawn) The method of Claim 25, wherein the die carriers approximately 2" by 2" or 4" by 4".

27. (Withdrawn) The method of Claim 26, wherein the die carriers are waffle packs or GEL-PAK die carriers.

28. (Withdrawn) The method of Claim 23, wherein the securing is by applying a spring force to a side of the die carrier to bias the opposite side of the die carrier against a side of the slot.

29. (Withdrawn) The method of Claim 23, wherein the adapter frame has the same physical exterior dimensions as a SEMI standard film frame design for an 8-inch or 12-inch wafer.